

Introduction to Evidence Based Practice

John Bleicher, RN
Trauma Coordinator



What is EBP?

We all have questions

We all wonder, “What is the best way of doing this?”

We get frustrated when there is so much variability in physician practice, even within individual specialty groups

We get frustrated when new ideas immediately get discounted

Not all questions have answers, but most questions have been studied

What is EBP?

This is a process that teaches us how to find out what is known (through the research done by others) then how to incorporate that knowledge into our daily practice

The goal is not to make a rigid protocol for everything we do or to practice “cookie-cutter” medicine

The goal is to find and apply broad consensus when it exists

For Example.....

- Does prehospital intubation of the trauma patient improve outcomes?
- Is there an advantage for trauma patients to having the backboard removed sooner?
- How often should chest tube dressings be changed?
- Should IVs started in the field be routinely removed within 48 hours to decrease chance of infection?
- Should portable C-spine films be done during the initial resuscitation?
- What confirmatory measures should we be using post-placement of endotracheal and NG tubes?

Definition of EBP

- Problem-solving approach that integrates:
 - Systematic search for and critical appraisal of most relevant evidence to answer a clinical question
 - One's own clinical expertise
 - Patient preferences and values
 - Sources other than systematic reviews of randomized clinical trials, including evidence from descriptive and qualitative studies as well as from opinion leaders and evidence-based theories

I Did What?

Changing Process for Coumadin/Minor TBI

- Went to a conference – heard about something intriguing
- Came home and did some lit research (a spectacularly unscientific research process, I might add)
- Tried to separate the wheat from the chaff (relevant to us)
- Made a proposal for change – wrote a summary of articles and prepared PowerPoint to present – brought it to Trauma and ED Committees – had separate discussions with Blood Bank
- Eventual approval with change in process which we are now evaluating (process and result then shared with others)
- I did what? I did an EBP project...just didn't know it at the time!

Intro to Evidence Based Practice

- Why EBP?
 - 2001 study states healthcare providers not following established EBP guidelines at least 1/3 of the time
 - Evidence suggests that patients who receive care based on best/latest evidence have 28% better outcomes
 - Can take as long as 17 years to translate research findings into practice
 - Healthcare providers who use evidence-based approach have higher levels of satisfaction
 - Starts with nursing, but ideally adopted by all clinical disciplines

The Enemies of EBP

- Nurses who think it doesn't matter because MDs tell us what to do and how to do it
- Providers who doesn't care/don't want to be bothered
- Providers who think it's "somebody else's" job to figure this out
- Administrators who talk about quality but are unwilling to commit resources towards clinicians solving real problems
- Anybody who says, "Because that's how I trained" or "Because we've always done it that way"

The Friends of EBP

- Providers who accept responsibility for the care they deliver
- Providers who don't always expect someone else to solve all their problems
- People with minds open to change who do not blindly accept the status quo
- Administrators who support quality

Our Goal

All people who care for patients accept responsibility for the quality of their care - be accountable

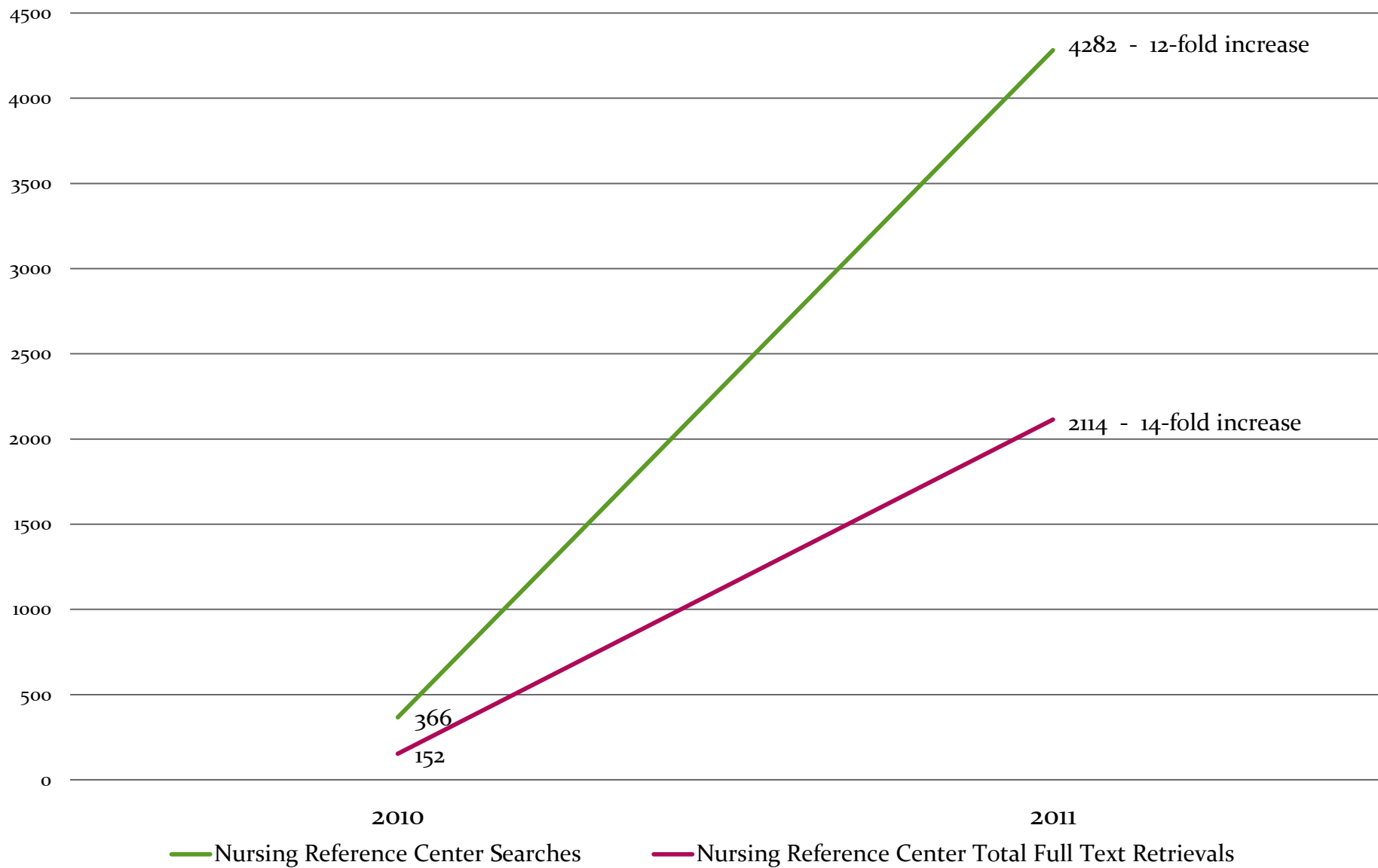
Our Tools

- Our concern for our patients
- Our brains
- The internet
- Our wonderful librarian

Evidence of Organizational Support

- Having evidence-based decision making integrated into performance expectations
- Having up-to-date resources and tools available
- Providing ongoing EBP knowledge and skills-building workshops
- Providing and encouraging utilization of EBP mentors

Nursing Reference Center Use



Steps in the Process – The 5 A's

- Identification of problem/issue/area of concern.....**Ask** (PICOT question)
- Conduct literature search.....**Acquire**
- Critically appraise the literature (the most complicated step).....**Appraise**
- Implement the plan.....**Apply**
- Evaluate the effects of the plan.....**Assess**

Evidence-Based Practice Step by Step

Series of articles by Melnyk and Fineout-Overholt
AJN Nov 2009 – Sept 2011

Article #1

Igniting a Spirit of Inquiry: An Essential Foundation for EBP

**How nurses can build the knowledge and skills they
need to implement EBP**

- Clinicians often follow outdated policies and procedures without questioning their current relevance or accuracy, or the evidence to support them
- Need to develop/encourage a spirit of inquiry – an ongoing curiosity about the best evidence to guide clinical decision making – and a culture to support it
- This culture allows questions to be asked while care is being delivered

EBP Organizational Culture

Context of Caring

Research evidence and
evidence-based theories

Clinical expertise (e.g., evidence from patient assessment as well as use of health care resources) -----> Clinical decision-making -----> High-quality patient outcomes

Patient preferences and values

- Institute of Medicine goal: by 2020, 90% of health care decisions evidence based
- Must be able to measure results
- When nurses engage in EBP they experience greater autonomy in their practices and higher levels of job satisfaction
- Though extrinsic government efforts to improve care may be beneficial, intrinsic motivators more effective

Needed for EBP to thrive.....

- Never-ending spirit of inquiry
- Strong beliefs in the value of EBP
- Knowledge/skills in EBP along with confidence to use them
- Commitment to deliver the highest quality evidence-based care to patients and their families

Perceived Barriers

- Inadequate EBP knowledge and skills
- Lack of mentors to work with providers at the point of care
- Inadequate resources and support from administration
- Insufficient time

Factors That Facilitate Implementation

- Having EBP knowledge and skills
- Belief in the value of EBP and the ability to implement it
- Supportive culture that supplies necessary tools
- EBP mentors

Step Zero

- Refers to the continual cultivation of a spirit of inquiry
- My analogy: must prepare the soil before planting the seed
- If step zero is not accomplished, you will not be able to accomplish any of the subsequent steps

Questions That Spark a Spirit of Inquiry

- Whom can I ask to assist me?
- Which of my practices are evidence based and which are not?
- When is the best time to question current clinical practices and with whom?
- Where can I find the best evidence to answer my questions?
- Why am I doing what I do with my patients?
- How can I become more skilled in EBP and help others to implement evidence-based care?

Case Scenario: Rapid Response Teams

Rest of series based around this scenario:

- Med-surg unit
- Perceived higher level of acuity lately with increased number of cardiac arrests
- Recently read an article that says implementation of rapid response teams → decreased rates of in-hospital cardiac arrests and unplanned ICU admissions
- Take article to manager and she is intrigued but wants more data

What now?

Article #2

The Seven Steps of Evidence-Based Practice

Following this progressive, sequential approach will lead to improved health care and patient outcomes

Step Zero

Continual cultivation of a spirit of inquiry

Step 1: Ask clinical questions in PICOT format

P – Patient population of interest

I – Intervention or area of interest

C – Comparison intervention or group

O – Outcome

T - Time

Step 2: Search for the best evidence

- Asking questions in PICOT format streamlines the search
- First, enter key phrases
 - Acute care hospitals
 - Rapid response team
 - Cardiac arrests
- Then combine the results of the searches for each of the terms/phrases
- Remember to set limits, such as “human subjects” and “English”

Step 3: Critically appraise the evidence

- Must evaluate for relevance, validity, reliability and applicability to the clinical question
- Rapid critical appraisal uses three important questions:
 - Are the results of the study valid? - evaluate research methods
 - What are the results and are they important?
 - For intervention studies, did intervention work (have positive effect on outcomes) and what is likelihood of obtaining similar results in this setting?
 - For qualitative studies, did the approach fit the purpose of the study and can the results be confirmed?
 - Will the results help me care for my patients? - were subjects similar to ours and can it be replicated in our environment?

Step 4: Integrate the evidence with clinical expertise and patient preferences and values

- EBP is strongly influenced by institutional and clinical variables
- What can your staff and your organization actually deliver?
- What do your patients actually want?

Step 5: Evaluate the outcomes of the practice decisions or changes based on evidence

- As in patient care.....assess, intervene, re-assess
- How do your outcomes match those from the studies? Why or why not?

Step #6: Disseminate EBP results

- Share results with colleagues in your own and other health care organizations when appropriate
 - EBP rounds
 - Presentations at local, regional and national conferences
 - Reports in peer-reviewed journals, professional newsletters and publications for general audiences

Article #3

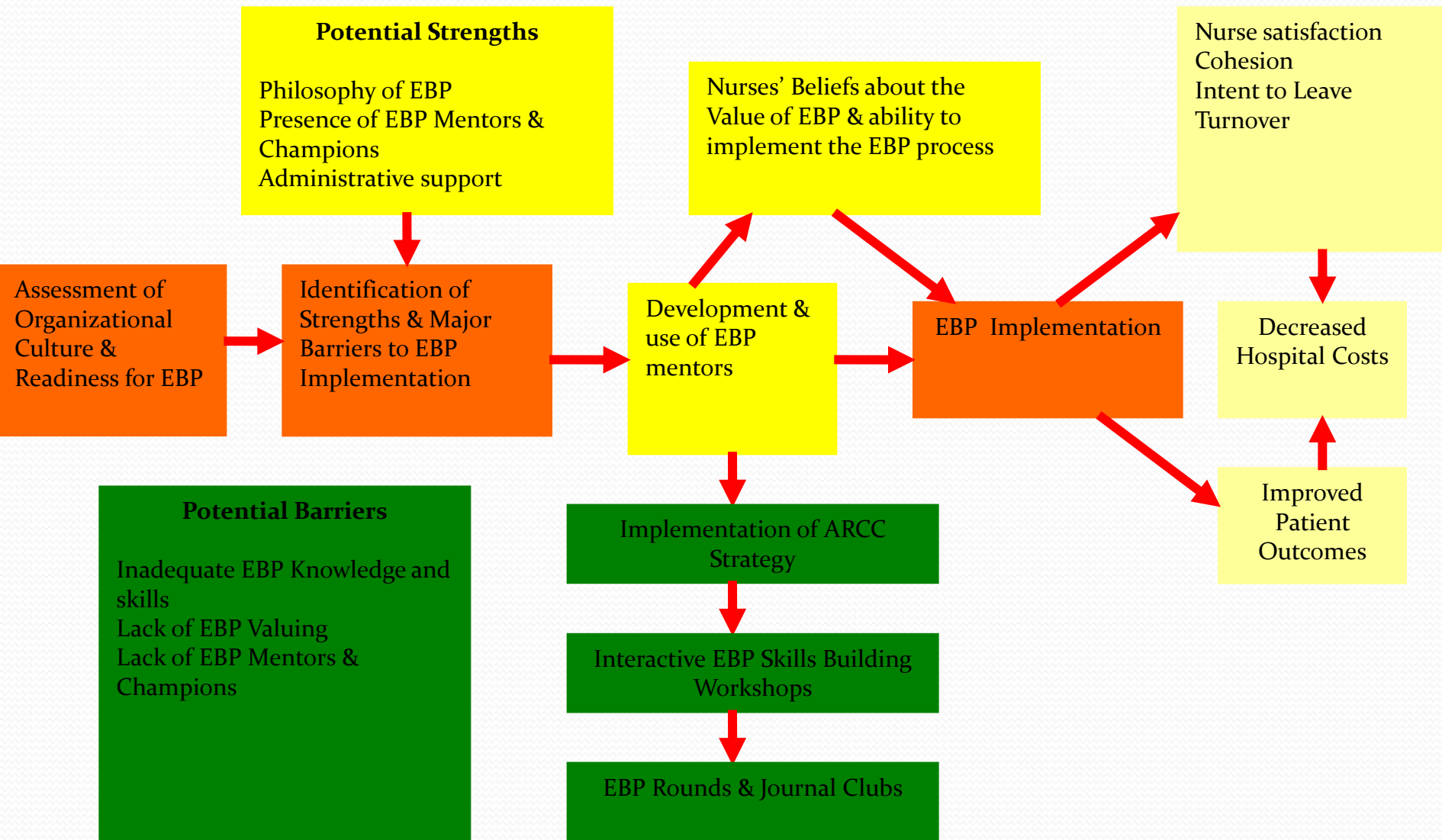
Searching for the Evidence: A Key Step in EBP

A successful search strategy starts with a well-formulated question

Templates/Definitions for PICOT Questions

Question Type	Definition	Template
Intervention or therapy	To determine which treatment → best outcome	In ____, how does ____ compared with ____ affect ____ within ____?
Etiology	To determine greatest risk factors or causes of condition	Are ____ who have ____ compared with those without ____ at ____ risk for ____ over ____?
Diagnosis or diagnostic test	To determine which test more accurate for diagnosing a condition	In ____, are/is ____ compared with ____ more accurate in diagnosing ____?
Prognosis or prediction	To determine clinical course over time and likely complications of a condition	In ____, how does ____ compared with ____ influence ____ over ____?
Meaning	To understand meaning of an experience for an individual, group or community	How do ____ with ____ perceive ____ during ____?

ARCC Model



ARCC Model (in English)

How to incorporate EBP into your culture

- Focuses less on how to do a change process and more on how you incorporate EBP into your organization's culture
- Starts with an assessment of organizational culture
- Evaluate strengths and barriers to EBP implementation, develop and utilize mentors and grow it from the bottom up
- The role of the mentor is not to do all the work, but to assist and teach others
- Frequently → greater nursing satisfaction, improved patient outcomes and decreased hospital costs

Is it EBP or Research?

RN wonders if significantly increasing the amount of protein patients receive in the first few days after surgery would → faster wound healing with less infections

Option #1

- RN draws up proposal – gets IRB approval
- For one year period of time, splits post-op population into 2 groups:
 - Group A gets normal diet
 - Group B gets 25% more protein than Group A
- After one year, measures wound healing and infection rates
- Tries to draw correlation between these findings and the amount of protein ingested

Option #2

- RN (with help as needed) does literature search to find articles summarizing studies done by other centers
- Evaluates quality/applicability of the studies
- Determines the consensus opinion from the work of others as to whether or not increased protein ingestion post-operatively → faster wound healing and less infections
- Works to implement change if consensus opinion differs from local practice

What SPH is Doing

- Trying to foster a spirit of inquiry, built from the bottom up
- Worked with Melnyk and Fineout-Overholt here for two days
- Sent two staff to ASU for week-long course in EBP mentoring
- Have Research Council with 1 or 2 supported projects per year
- EBP for the E.B.P. (Extremely Busy Professional) class
- All policy updates must be evidence-based
- Have EBP work group which meets monthly (not all RNs)
 - Educate ourselves and others
 - Identify and support EBP projects by working with Unit Based Practice Councils (UBCs)
 - Provide EBP toolkit (online and on each unit)

What SPH is Doing

- Collaboration with MSU School of Nursing
 - One of their instructors went to ASU course
 - Realized her students don't know what questions to ask to make learning the EBP process meaningful
 - At beginning of each semester 4-5 of them meet with our EBP group
 - After polling our UBCs, we give them a clinical question
 - They do the lit searches
 - We help them evaluate the literature
 - They make a proposal for change and present it to our group
 - Have investigated chest tube dressing changes and confirmation of NG placement (on uses after initial confirmation)
 - They learn and gain confidence through project completion, attending our meetings and making their final presentation to our group

Some of Our Projects.....

- Nerve block discharge instructions
- Routine trach care
- Staple and suture removal
- Double gloving for cardiac surgical cases
- Effect of altitude on in-flight ETT cuff pressures
- Comfort measures prior to NG insertion
- ED hand off communication at shift change
- Noise reduction in patient care areas

Chapter 4

Searching for the Evidence

Strategies to help you conduct a successful search

Chapter 5

Critical Appraisal of the Evidence: Part 1

An introduction to gathering, evaluating and recording the evidence

Chapter 6

Critical Appraisal of the Evidence: Part 2

Digging deeper - examining the “keeper” studies

Chapter 7

Critical Appraisal of the Evidence: Part 3

The process of synthesis: seeing similarities and differences across the body of evidence

Chapter 8

Following the Evidence: Planning for Sustainable Change

The EBP team makes plans to implement an RRT in their hospital

Chapter 9

Implementing an Evidence-Based Practice Change

Beginning the transformation from an idea to reality

Chapter 10

Rolling Out the Rapid Response Team

The pilot phase begins

Chapter 11

Evaluating and Disseminating the Impact of an Evidence-Based Intervention: Show and Tell

After the data are gathered and analyzed, it's time to share what you've learned

Chapter 12

Sustaining Evidence-Based Practice Through Organizational Policies and an Innovative Model

**The team adopts the Advancing Research and Clinical
Practice Through Close Collaboration model**

Summary

- Physicians practice medicine
- There is a distinct nursing practice and we must be accountable
- With the advent of the internet, we now have access to previously unimaginable amounts of information about research relative to the practice of nursing
- EBP is a process of accessing and utilizing this information to the potential benefit of our patients, our facilities and ourselves